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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/622,903	07/17/2003	Daniel John Park	SLA1291	2834

55859 7590 10/14/2008

THOMAS R. BERTHOLD
18938 CONGRESS JUNCTION COURT
SARATOGA, CA 95070

EXAMINER	
SMITH, MARCUS	

ART UNIT	PAPER NUMBER
2419	

MAIL DATE	DELIVERY MODE
10/14/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/622,903	PARK, DANIEL JOHN	
	Examiner	Art Unit	
	MARCUS R. SMITH	2419	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *16 September 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,2,4-8,10,13-16 and 18-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,2,4-8,10,13-16 and 18-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 9/16/08 has been entered.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1-2, 4-8, 10, 13-16, 18-19, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chang (US 2003/0123448) in view of Datta et al. (US 6,295,276).

with regard to claims 1 and 14, Chang teaches (figure 1:

A method of controlling transmission of media access control (MAC) data packets with MAC headers in a power line communication (PLC) local area network (LAN) having a plurality of PLC stations and at least one PLC media access control (MAC) bridging device for bridging packets between the PLC LAN and a non-PLC LAN, the method comprising:

providing a PLC central coordinator (LES, 18) in the PLC LAN for managing allocation of PLC LAN resources (page 1, paragraph 18); and

assigning by the PLC central coordinator a temporary_ equipment identifier (TEI) (LEC ID) for each PLC station and PLC MAC bridging device (page 1, paragraph 17);

at a PLC MAC bridging device (NP, 26), for a packet from a non-PLC source station wherein the packet has a MAC header containing the source MAC address and the destination MAC address for a PLC destination station (page 4, paragraph 50) , modifying the MAC header by removing the source MAC address and destination MAC address from the MAC header and inserting into the MAC header a ConnectionID (VCI) (page 4, paragraph 47, and page 5, paragraph 55 see step 92 in figure 3; note that only the VCC and LEC ID information is used), the ConnectionID identifying the PLC MAC bridging device's TEI and the PLC destination station's TEI (page 5, paragraph 54); and

transmitting said packet with said modified MAC header having the ConnectionID, but not having the source MAC address and the destination MAC address from the PLC MAC bridging device to the PLC destination station (page 5,paragraph 55, see step 96 in figure 3).

Chang discloses all of the subject matter as described above except for a method of transmitting packets over power lines in a local area network.

Datta et al. teaches a controller (central coordinator) for nodes 102 in a LAN to connect to WAN through routers (bridge devices) (figure 2: column 5, lines 53-65). Wires connect the nodes in the LAN to each other and those wires can be modulated AC power lines (column 1, lines 45-50) in order to use bandwidth more efficiently and delay expense upgrades to line technology (column 2, lines 55-60).

Therefore it would have been obvious to one having ordinary skill in the art at the time invention was made to use power line communication in LAN as taught by Datta et al. in the system of Chang in order to use bandwidth more efficiently and delay expense upgrades to line technology.

with regard to claims 2 and 14 (see claim 1) expect for (See figure 4):

at a PLC MAC bridging device, for a second packet bridged from a PLC source station wherein said second packet has a PLC MAC header with a ConnectionID containing the TEI of the PLC source station and the TEI of said bridging device (page 5, paragraph 56, step 102, the examiner views ATM packet has the header with VCI and LEC ID) , modifying said second bridged packet by removing the ConnectionID from the PLC MAC header and inserting into PLC MAC header the 48-bit MAC address of the non- PLC destination station (page 4, paragraph 47, the examiner views the cache mapping the MAC address to virtual connections, and vice versa as removing the virtual channel connection, VCI, and inserting MAC address to create the Ethernet packet.) and transmitting said modified second bridged packet with the 48-bit MAC

address of the non-PLC destination station and without said ConnectionID from the PLC MAC bridging device to the non-PLC destination station (page 5, paragraph 60, see step 120 in figure 4). (The examiner views the header in the Ethernet packet of having MAC addresses and the header in the ATM packet of having Virtual channel connection, VCI as inherit.)

with regard to claim 4, Chang et al. teaches:

The method of claim 1 wherein the PLC MAC bridging device caches a source TEI and a source 48-bit MAC address of all broadcast data packets received from other bridge devices on the PLC LAN (page 5, paragraph 48).

with regard to claim 5, Chang teaches:

The method of claim 1 wherein a PLC MAC bridging device establishes a connection for bridged traffic only when traffic from a non-PLC LAN source station is received for a destination station on the PLC LAN where the destination station's TEI, bridging device TEI and destination station 48-bit MAC address are cached in the bridging device (step 86, page 4, paragraph 52).

with regard to claim 6, Chang teaches:

The method of claim 1 wherein the PLC MAC bridging device establishes a connection for bridged traffic only when traffic from a PLC LAN source station is received for a destination station not on the PLC LAN where the bridging device's TEI and destination station 48-bit MAC address are cache in the bridging device (Step 84, page 4, paragraph 52).

with regard to claims 7 and 18, Chang et al. teaches:

The method of claim 1/14 which includes establishing a unique connection for every pair of stations that cross a PLC MAC bridging device (page 1, paragraphs 17-18: The VCI is associated with the request MAC address can be view as the unique connection.).

with regard to claims 8 and 19, Chang et al. teaches:

The method of claim 1/14 which includes bridging packets across the PLC LAN only in PLC bridging devices (page 3, paragraph 39).

with regard to claim 10 (see figure 6 or figure 7), Chang et al. teaches:

The method of claim 1 which includes interworking the bridged packets between the PLC LAN and non-PLC LAN using the ConnectionID and TEIs only in the PLC LAN and using 48-bit MAC addresses outside the PLC LAN (page 4, paragraphs 46-47).

with regard to claims 13 and 20, Chang et al. teaches:

The method of claim 1/14 which includes, for packet traffic transmitted intra-PLC, identifying a packet's source station and destination station by inspecting the ConnectionID field in the PLC MAC header and referencing a connection table (page 5, paragraph 54).

with regard to claim 15, Chang et al. teaches:

The method of claim 14 wherein a PLC MAC bridge establishes a connection for bridged traffic only when traffic from a non-PLC LAN source station is received for a destination station on the PLC LAN where the destination station's TEI, bridge TEI and destination station 48-bit MAC address are cached in the bridge and wherein a PLC

MAC bridge establishes a connection for bridged traffic only when traffic from a PLC LAN source station is received for a destination station not on the PLC LAN where the bridge TEI and destination station 48-bit MAC address are cached in the bridge (page 4, paragraphs 47-48).

with regard to claim 16, Chang et al. teaches:

The method of claim 14, wherein the PLC MAC bridging device caches a source TEI and a source 48-bit MAC address of all broadcast data packets (ARP) received from other bridge devices on the same PLC LAN (page 5, paragraph 53).

Response to Arguments

5. Applicant's arguments filed 9/16/08 have been fully considered but they are not persuasive. The examiner strongly disagrees with the applicant that Chang fails to teach removing the source MAC address and destination MAC addresses from the MAC header and inserting into the MAC header a Connection ID. The examiner views *mapping* MAC addresses to virtual channel connections (VCCs) as *replacing* MAC addresses with VCCs which teaches the claim limitation above. The applicant's explanation of the distinction between replacing and mapping is not valid. The term mapping means to translate a first item (MAC addresses) to second item (VCCs) and vice versa.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MARCUS R. SMITH whose telephone number is

(571)270-1096. The examiner can normally be reached on Mon-Thurs: 7:30 am - 5:00 p.m. and every other Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wing Chan can be reached on 571 272-7493. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MRS 10/08/08

/Wing F. Chan/
Supervisory Patent Examiner, Art Unit 2619
10/09/08